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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shigetaka Kinme

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EXAMINER

SPISICH, GEORGE D

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/723,071	Applicant(s) KINME ET AL.	
	Examiner George D. Spisich	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7 and 9 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on March 13, 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plate pieces having a length such that they pass an axial position of the protrusions (which is claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Figure 3 may show this feature, however, Figure 2 does not properly show the plate(s) extending past the protrusions in an axial direction. It appears to the Examiner that the plates 6b should be shown in Figure 2 to extend past the protrusions 8 (which it clearly does not do) and to remain consistent with Figure 3 since cross-hatching has been used to indicate a cross-section in the plates when in this view. The corrected Figure 2 (submitted March 13, 2006) which merely deletes the reference line III-III is not only unclear as to the description and location of where Fig 3 is taken, but still does not correct the Figure to show the plate(s) extending past the protrusion as should be shown in Figure 2.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

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is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Changes to the specification on March 13, 2006 that delete the reference line III-III in Figure 2 should not have been made. The description of Figure 3 should include the position labeled on Figure 2 that is necessary to clearly understand the location of Figure 3.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is unclear. In line 2, there is claimed the “absorbing ring which does not have the ring portion and the plate pieces” has: another ring portion....and other plate pieces. This is still contradictory. The manner in which the “second impact energy absorbing ring” is claimed is unclear. Examiner suggests that since in claim 2, there is claimed “one of the energy absorbing rings”, that in claim 6, there merely only requires the language “the other one of the energy absorbing rings has....”.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP2000-219139 (provided in Applicant's IDS in view of Kim et al. (USPN 6,109,652) and further in view of Cooper (USPN 3,877,319) (provided in Applicant's IDS).

JP '139 discloses a steering apparatus comprising a steering shaft (1) having an end portion coupled to a steering member (A), a first housing (2) for rotatably supporting the steering shaft and a second housing (4) engaged with the first housing via two impact energy absorbing rings (51a and 51b as shown in Figure 3-9) that are separate from each other in an axial direction, so as to be movable in the axial direction. The two impact energy absorbing rings are situated as the rings are situated in Applicant's invention. However, JP '139 does not show one of the first or second housing having impact energy absorbing protrusions between the impact rings and the protrusions are separate from each other in an axial direction and contact the other of the first or second housing. Nor does JP '139 discloses impact energy absorbing rings having plate pieces spaced around protrusions.

Kim et al. discloses an impact energy absorbing column having protrusions extending from the first or second housing (as seen in Figures 6 and 9) that are spaced axially from each other and contact the other of the first or second housing.

Cooper et al. (as seen in Figs. 3 and 5) disclose an impact energy ring having a ring portion to contact with an end face of a housing and a plurality of plate pieces disposed continuously with the ring portion separate from each other at intervals corresponding to impact energy absorbing protrusions (78). Cooper et al. teaches the

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interrelation of the impact energy absorbing rings with the protrusions and the plate pieces having a length such that the plate pieces pass an axial position of one of the first and second impact energy absorbing protrusions. In the Cooper et al. teaching, the "ring portion" is considered to include the "lip" portion of the ring portion that contacts the end face of one of the housings and the "body" portion of the ring portion that connects the "lip" portion with the plate pieces. There is no reason why the "ring portion" must only include the lip portion. Given this, the plate pieces are disposed continuously with the ring portion separately from each other in a circumferential direction and are spaced from each other to provide gaps between the plate pieces and which correspond to the impact energy absorbing protrusions while the "ring portion" contacted the end face of one of the first and second housings.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the steering apparatus of JP '139 to add an additional impact energy feature which includes protrusions as taught by Kim et al. and to include a relationship between the impact energy absorbing rings and the protrusions as taught by Copper and as is claimed, so as to further enhance the impact absorbing ability of the steering apparatus.

Cooper et al. simply teaches the use of a protrusion and an impact energy absorber having a slot. The duplication of this feature on the arrangement of JP '139 would be obvious since the arrangement of JP '139 already shows two impact absorbing elements.

Allowable Subject Matter

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

With respect to Applicant's argument that Cooper only teaches one impact absorbing ring (not two), Examiner disagrees and maintains the rejection. Cooper et al. teaches the use of an impact absorbing ring the engages a protrusion and to provide this feature on JP '139 in view of Kim it would have been obvious to provide this detail on both impact absorbing rings of JP '139.

With respect to Applicant's argument that the references combined do not disclose two different kinds of impact absorbing rings one of which has a ring portion to contact an end face of a first or second housing and a plurality of plate pieces disposed continuously with the ring portion separate from each other and providing "gaps" between the plate pieces, Examiner disagrees and maintains the rejection. As stated in the above rejection, Examiner is considering the "ring portion" to include the "lip portion" and a "body portion" of Cooper et al. Given this, the claimed diameter relations, the contact of the end face of one of the housings and the plate pieces disposed

continuously and separately from each other and providing gaps between the plate pieces is taught by Cooper et al. as claimed by Applicant.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fevre et al. (USPN 5,758,545), EP 0713820.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George D. Spisich
May 22, 2006



PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
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